

RNA-NEURO

Systems Analysis of novel small non-coding RNA in neuronal stress responses: towards novel biomarkers and therapeutics for neurodegenerative disorders

Motor neuron disease, frontotemporal dementia (FTD) and Parkinson's disease (PD) are all disorders that lead to the death of nerve cells. This project aims to identify the disease-specific 'fingerprint' of a new class of molecules. These molecules are linked directly to stress responses in nerve cells and are called 'small non-coding RNAs'. These are small ribonucleic acids that do not directly produce proteins, but rather regulate wider biological functions. Of note, these can be detected in various fluids of the body, including blood. By systematically analyzing these molecules, we aim to identify whether detecting them in blood helps in patient diagnosis. Furthermore, we know that certain patients have a rapid and progressive disease, while in other patients the disease progresses more slowly. We therefore aim to investigate whether such molecules also provide information regarding disease progression, which is important information for doctors and patients alike. Finally, we will explore the function of these small non-coding RNAs, with the ultimate aim to employ these as novel therapeutics, as they may boost defense mechanisms in nerve cells.

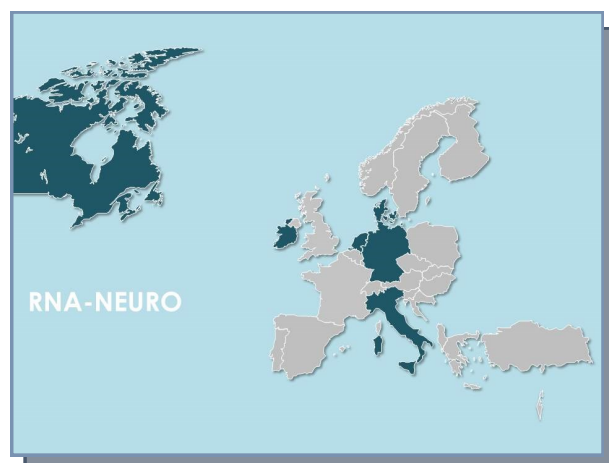
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Duration: 3 years

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